

TRANSPORTATION OF GROUNDWATER

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What is Groundwater Transportation?

Groundwater transportation is the transfer of groundwater away from the land from which it is withdrawn for use on other land.

This presentation focuses primarily on transportation of groundwater in areas outside of Active Management Areas (AMAs) and transportation from areas outside of AMAs into AMAs.

1980 Groundwater Management Act

Major Provisions of 1980 Groundwater Management Act:

- Extensive regulation of groundwater in four (now five) areas of state designated as AMAs.
- Limited regulation in other areas of the state – all wells must be registered; no new lands may be irrigated in two (now three) Irrigation Non-Expansion Areas.
- Created ADWR to administer the Act.
- Required ADWR director to designate the boundaries of groundwater basins and sub-basins in the state.
- New laws governing groundwater transportation.

Groundwater Transportation Provisions of 1980 Act Concerning Areas Outside of AMAs

- Groundwater allowed to be transported anywhere within the state.
- No payment of damages if groundwater is transported:
 - Within sub-basin or within groundwater basin that does not have sub-basins.
- Subject to payment of damages if groundwater is transported:
 - Between sub-basins of basin outside an AMA.
 - Away from a basin outside an AMA.
- No presumption of injury from fact of transportation. Court must consider acts by transporter to mitigate damages.

Water Farms

- Between 1984 and 1986, three cities in the Phoenix AMA purchased land outside the AMA with intent to transport water to their service area. The primary reason was to comply with conservation and assured water supply requirements in GMA.
 - 1984 - Scottsdale purchased Planet Ranch in western Arizona.
 - 1985 - Mesa purchased 12,000 acres of farm land in Pinal AMA.
 - 1986 - Phoenix purchased 14,000 acres of farm land in the McMullen Valley Groundwater Basin in La Paz County.

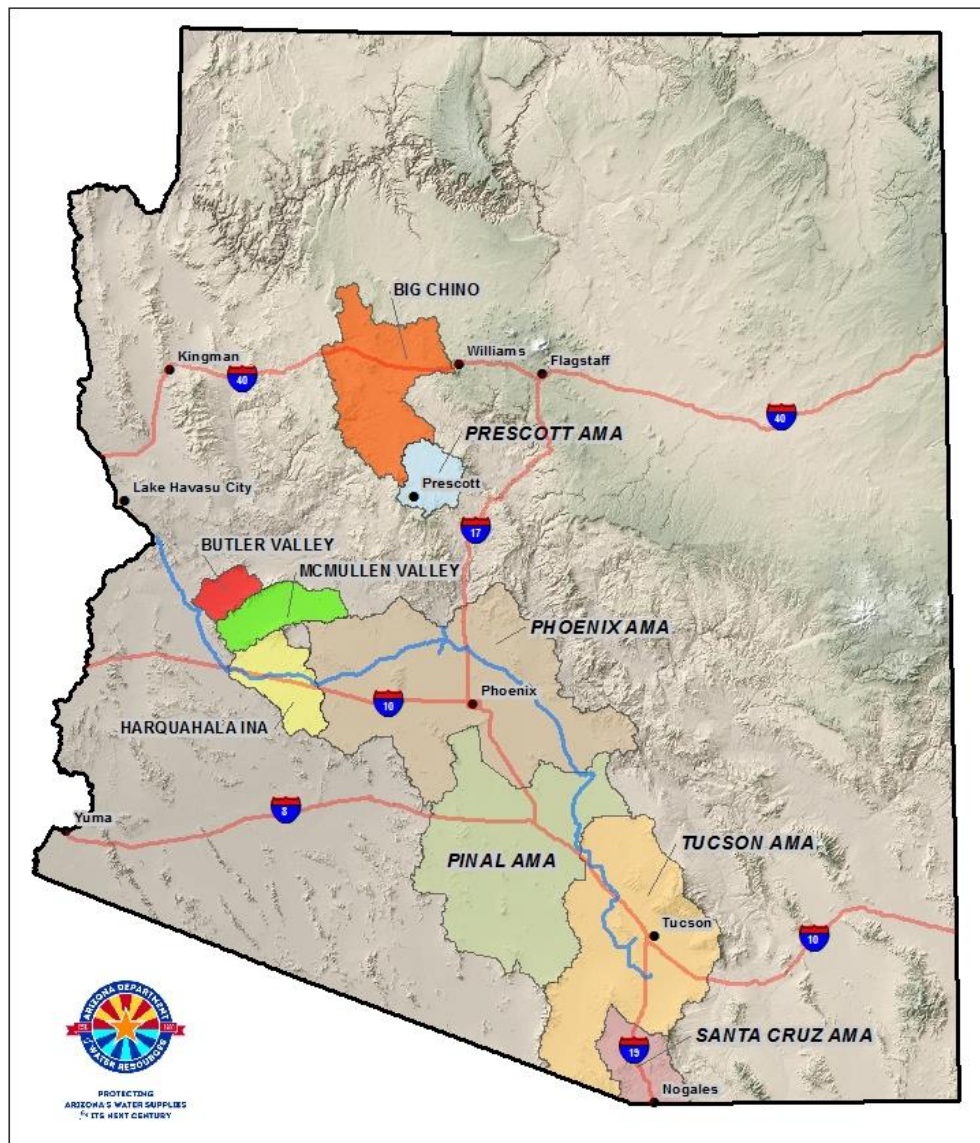
Reaction to Water Farms Outside of AMAs

- Water farms raised several concerns to people in rural Arizona:
 - Transportation of groundwater away from the farms would reduce groundwater supplies in rural areas.
 - Purchase of farm land by municipalities would reduce tax base in rural counties.
 - Purchase of farm land by municipalities would end farming on the lands, which would hurt businesses that depend on the agricultural economy.

1991 Groundwater Transportation Act

Title 45, Chapter 2, Article 8.1

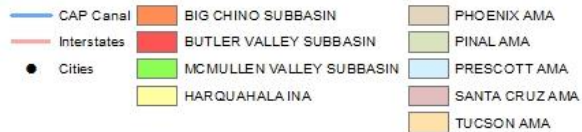
- 1991 – Legislature passed the Groundwater Transportation Act of 1991 (S.B. 1055). The Act, with certain amendments, is in effect today.
- The Act prohibits transportation of groundwater from a basin outside of an AMA into an AMA with four exceptions:
 - McMullen Valley Groundwater Basin into Phoenix AMA.
 - Butler Valley Groundwater Basin into any AMA.
 - Harquahala Irrigation Non-Expansion Area into any AMA.
 - Big Chino Sub-Basin of Verde River Groundwater Basin into Prescott AMA – (not discussed in this presentation).



State of Arizona

Active Management Areas
and
Subbasins

0 25 50 100 Miles



Map created by Daniel Fielder, ADWR, on 4/7/2015

McMullen Valley Groundwater Basin

A.R.S. § 45-552

- Groundwater can be transported into the Phoenix AMA by:
 - Phoenix from the land it purchased in 1986 (no longer applies).
 - A person who purchased historically irrigated land before 1988 in the portion of the basin located in Maricopa County (1994 amendment).
 - Any city, town or private water company that purchases the land from an entity described above.
- Groundwater can be used by any city, town or private water company or the Arizona Water Banking Authority for firming Indian water supplies.
- Maximum amount of groundwater that may be transported: annual average of 3 af per historically irrigated acre (6 million af in total).
- Maximum depth: 1,200 feet bls for assured water supply purposes.

Butler Valley Groundwater Basin

A.R.S. § 45-553

- Groundwater may be withdrawn from land owned by the state or a political subdivision of the state and transported to an AMA.
- No volume or depth limitations, but ADWR's rules limit depth to 1,000 feet bls (1,100 feet Pinal) for assured water supply purposes.
- No restrictions on who may use the groundwater.

Harquahala INA

A.R.S. § 45-554

- The state or a political subdivision that owns lands eligible to be irrigated may transport groundwater from the land to any AMA for its own use. A 2006 amendment also allows the groundwater to be used by the Arizona Water Banking Authority for firming Indian water supplies.
- Maximum volume of groundwater that may be transported: annual average of 3 af per eligible acre.
 - Director may allow greater volume if it will not cause unreasonably increasing damage to other water users.
- Maximum depth from which groundwater may be withdrawn: 1,000 feet bls.

Additional Provisions of 1991 Groundwater Transportation Act

- Groundwater transported into an AMA pursuant to one of the four exceptions is subject to payment of damages to injured landowners. No presumption of injury from fact of transportation.
- A well constructed after 9/21/91 may not be used for transportation unless the Director determines that it will not unreasonably increase damage to surrounding land and other water users (A.A.C. R12-15-1305).

Additional Provisions of 1991 Groundwater Transportation Act

- A city, town or private water company with a CAP subcontract may not transport groundwater into an AMA unless it is using at least 80 percent of its CAP water (does not apply to Big Chino Sub-basin).
- A person who transports groundwater away from a county must pay an annual transportation fee to the county based on volume transported.
- A city or town that purchases land in another county and transports groundwater or surface water away from that county must make payments in lieu of taxes to the county.

Status of Original Water Farms

- As of today, no water has been transported into an AMA for municipal use.
- In 2011, Scottsdale sold Planet Ranch to a subsidiary of Freeport Minerals Corp.
- In 2012, Phoenix sold its land in McMullen Valley to a farming operation.
- In 2012, Mesa entered into contract to sell its land in Pinal County to a farming operation in three installments over seven years.

Reasons Why Cities Sold Water Farms

- Reasons cities in Phoenix AMA sold their water farms include:
 - Cities obtained non-groundwater supplies from other sources – underground storage of their CAP water; leases of CAP water from Indian tribes; effluent reuse; CAGRDR.
 - High cost to own and maintain the land.
 - Cities had need for money from sale of land.
 - Transportation of groundwater through CAP canal requires a wheeling agreement, and a standard form of agreement was not approved by the U.S. until February 2017.

Current Plans To Transport Groundwater into an AMA – City of Scottsdale

- Scottsdale has purchased approximately 1,279 acres of land in the Harquahala INA for the purpose transporting groundwater from the land via the CAP canal.
- Transportation had not previously occurred because no standard form of wheeling agreement had been approved by the U.S.

Issues Related to Transportation of Groundwater Into an AMA

- Financial Issues:
 - Cost of acquiring and maintaining land from which groundwater can be transported.
 - Payments in lieu of taxes and groundwater transportation fee if groundwater will be transported away from a county.
 - Cost of transporting the groundwater – either through construction of a pipeline (construction costs and costs of rights-of-way) or use of CAP canal.
- Environmental Issues:
 - Potential ESA challenges if groundwater withdrawals impact endangered species or habitat.

Transportation of Groundwater Outside of AMAs

- 1993 – Legislature amended A.R.S. § 45-544 to prohibit transportation of groundwater from a basin outside of an AMA to another basin outside of an AMA, with several exceptions:
 - One exception allows transportation occurring as of 1/1/93 to continue and expand.
 - Another exception allows a city, town or private water company whose service area is in two adjacent basins and who served customers in both basins as of July 1, 1993 to transport groundwater between the basins.
 - Another exception allows water to be transported for mineral extraction and processing (except from the Parker or Little Colorado River Plateau Basins).

Summary of Current Law

- Groundwater may be transported within a groundwater basin outside of an AMA.
- Transportation between sub-basins of a groundwater basin outside of an AMA is subject to payment of damages to injured landowners.
- Groundwater may not be transported away from a groundwater basin outside an AMA into an AMA, with exceptions that allow groundwater to be transported from McMullen Valley Basin, Butler Valley Basin, Harquahala INA and Big Chino Sub-Basin, all subject to payment of damages.
- Groundwater may not be transported from a groundwater basin outside of an AMA into another basin outside of an AMA, with certain exceptions that are subject to payment of damages.

Groundwater Transportation

Questions